

REMARKS

Claims 1-9 and 11-71 are pending, of which claims 1, 25, 48, 54, 55, 56, and 61, are independent. In the Office Action, the Examiner rejects claims 1-9 and 11-71. Applicants amend claims 1, 25, 48, 54, 55, 56, and 61 herein. No new matter is added by these amendments. Applicants respectfully request reconsideration of the outstanding rejections and passage of the claims to allowance in light of the following.

Applicants thank the Examiner for withdrawing the 35 U.S.C. §112 rejections (Office Action at page 2).

Interview Summary

Applicants further thank the Examiner for the courtesy of an interview on December 15, 2009. As indicated in the Interview Summary of December 19, 2009, Applicants discussed the outstanding rejections with the Examiner as well as several options to clarify the claims and expedite prosecution. More specifically, Applicants noted that the cited references did not appear to include a debugger that interfaces with both a model view of a model being executed and an execution list view of block methods that are called during execution of the model, as described in the claims.

The Examiner indicated that, in order to expedite prosecution, the above-described features of the claims should be further clarified. In particular, the Examiner requested that the following features be described in more detail: the relationship between the blocks and their executing methods; the way that the debugger interfaces with the model and execution list view; and that the method and device visually indicate an executing method and corresponding block in an interface. Applicants have amended independent claims 1, 25, 54, and 55 accordingly. Support for these amendments can be found throughout the application as originally filed, and more specifically at page 6, lines 6-7; page 25, lines 6-25; page 28, lines 8-19; page 38, line 23 through page 39, line 3; and page 45.

Further, the Examiner noted during the Interview that the art of record did not appear to disclose or suggest the single-task and multi-task simulation loops described on page 32 of the present Application. The Examiner indicated that amending the claims to recite this aspect may

also expedite prosecution. Accordingly, Applicants amend independent claims 48, 56, and 61 as suggested by the Examiner.

Applicants provided the above proposed Amendments to the Examiner on December 18, 2009. Applicants thank the Examiner for agreeing to a follow-up conversation regarding the proposed amendments on December 28, 2009. During the follow-up conversation, the Examiner indicated that the proposed amendments appear to overcome the cited references, subject to further consideration of the amended claim language.

Rejections under 35 U.S.C. §103(a)

Rejections in view of MathWorks, the Official Notice Taken, and Alpern

In the Office Action, claims 1-3, 5-9, 17-22, 24, 25-27, 29-33, 41-46, and 48-71 were rejected under 35 U.S.C. §103(a) as being unpatentable over MathWorks Simulink® “Dynamic System Simulation for MATLAB,” 1997 (hereinafter “MathWorks”) in view of Official Notice taken, and further in view of U.S. Patent No. 7,107,578 to Alpern (hereafter “Alpern”).

As described in detail in Applicants’ June 29, 2009 Response, MathWorks, the AAPA, and Alpern are not addressed to the debugging of block methods, as described in the present claims. Applicants reiterate, below, some of the arguments made in §II.A.1 of the June 29 Response (hereafter “6/29 Response”). In view of these arguments and the additional features to the amended claims, Applicants respectfully submit that the pending claims are in condition for allowance.

For example, none of the cited references disclose or suggest at least simultaneously displaying said model view and said block method execution list and visually indicating a currently executing method in said block method execution list view; nor altering said model view to visually indicate the owner of said currently executing method, as described in independent claims 1, 25, 54, and 55.

As discussed in the 6/29 Response at page 21, second full paragraph, the MathWorks debugger includes a “block” list, and not a block method execution list. Accordingly, the MathWorks debugger does not simultaneously display a block method execution list and a model view. Indeed, MathWorks does not address block methods at all, and accordingly does not

visually indicate a currently executing method in the block method execution list view, nor does MathWorks alter the model view to indicate the owner of the currently executing method. As further discussed in the 6/29 Response at pages 21-22, Alpern also does not address block method execution lists.

Further, none of the cited references disclose or suggest determining whether the modeling application should execute the model in a single task simulation loop or a multi-task simulation loop, wherein said model is executed in said single task simulation loop if said model is a single rate system wherein said sample time for each of said blocks is the same and said model is executed in said multi-task simulation loop if said model is a multi-rate system wherein at least one sample time for at least one of said blocks is different from at least one sample time for another one of said blocks, as discussed in independent claims 48, 56, and 61.

Claims 2-3, 5-9, 17-22, 24, and 70 depend from claim 1 and, as such, include each and every element of claim 1. Claims 26-27, 29-33, 41-46, and 71 depend from claim 25, and thus include each and every element of claim 25. Claims 49-53 depend from claim 48, and thus include each and every element of claim 48. Claims 57-60 depend from claim 56, and thus include every element of claim 56. Claims 62-69 depend from claim 61, and thus include every element of claim 61. In light of the above amendments, Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claims 1-3, 5-9, 17-22, 24, 25-27, 29-33, 41-46, and 48-71 be reconsidered and withdrawn.

Rejections in view of MathWorks, Alpern, the Official Notice Taken, and GNU gprof

Claims 4, 10-16, 23, 28, 34-40, and 47 were rejected under 35 U.S.C. §103(a) as being unpatentable over MathWorks in view of the Official Notice taken and Alpern, and further in view of Fenlason's "GNU gprof" (1998). Applicants respectfully traverse the rejection.

For at least the reasons presented above, MathWorks, the Official Notice taken, and Alpern alone or in any reasonable combination, do not disclose each and every element of independent claims 1 and 25. Applicants further submit that GNU gprof is also silent at least with respect to simultaneously displaying said model view and said block method execution list and visually indicating a currently executing method in said block method execution list view; and altering said model view to visually indicate the owner of said currently executing

method, as discussed in claims 1 and 25.

Claims 4, 10-16, and 23 depend from claim 1 and, as such, include each and every element of claim 1. Claims 28, 34-40, and 47 depend from claim 25 and, as such, include each and every element of claim 25. Therefore, MathWorks, the Official Notice taken, Alpern, and GNU gprof do not disclose each and every element of claims 4, 10-16, 23, 28, 34-40, and 47. Applicants therefore respectfully request that the 35 U.S.C. §103(a) rejection of claims 4, 10-16, 23, 28, 34-40, and 47 be withdrawn.

CONCLUSION

Applicants believe the pending application is in condition for allowance. If the Examiner feels that further discussion would expedite the proceedings, the Examiner is urged to call Applicants' attorney at the phone number listed below.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-106RCE2. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: January 19, 2010

Respectfully submitted,

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